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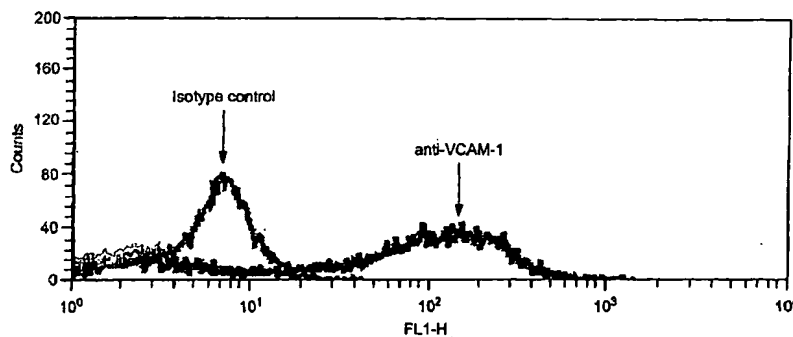
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- (71) Applicant (for all designated States except US): ROGER WILLIAMS MEDICAL CENTER [US/US]; 825 Chalkstone Avenue, Providence, RI 02908 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LUM, Lawrence, G. [US/US]; 8 Evergreen Court, Coventry, RI 02816 (US); LEE, Randall, J. [US/US]; 80 Downey Way, Hillsborough, CA 94010. - (US); KOUTTAB, Nicola, Mitri [US/US]; 58 Keel Avenue, Jamestown, RI 02835 (US).
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(54) Title: TARGETING AND TRACKING OF CELLS TO SPECIFIC ORGANS AND TISSUES IN VIVO



(57) Abstract: The present invention provides a method for tracking and targeting cells *in vivo*. In particular, cells are isolated, purified and armed with bispecific antibodies which are directly labeled with a detectable marker, or a second antibody specific for a region of the bispecific antibody is labeled with a detectable marker. The bispecific antibody is specific for a surface antigen of the cell and the second specificity of the specific antigen is for an antigen expressed on cells of tissues, organs or tumors. The armed and labeled cells can be tracked starting from the point of introduction into the animal until the cell reaches the target of interest by phenotyping cells from patient samples, obtained at different time intervals and locations, post-infusion. The isolated and purified cells are useful in any functional assay.

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